



**Supplementary Figure 1: Comparison of native and substituted MOG binding to DRB1\*0401 tetramer.** Various concentrations of MOG<sub>97-109</sub>, MOG<sub>97-109(107E-S)</sub> and influenza HA<sub>306-317</sub> peptides were incubated in competition with 0.01 mM of biotinylated HA<sub>306-317</sub> peptide in wells coated with HLA-DR0401 protein as previously described. After washing, the biotin-HA peptide was labeled with europium-conjugated streptavidin (Perkin Elmer) and quantified using a Victor<sup>2</sup> D fluorometer (Perkin Elmer). IC<sub>50</sub> values were calculated as the concentration needed for 50% inhibition of biotin-HA peptide binding to the HLA-DR0401.